

(2) A narrative of land capability and productivity, which analyzes the land-use description under paragraph (a) of this section in conjunction with other environmental resources information. The narrative shall provide analyses of:

(i) The capability of the land before any mining to support a variety of uses, giving consideration to soil and foundation characteristics, topography, vegetative cover, and the hydrology of the proposed permit area; and

(ii) The productivity of the proposed permit area before mining, expressed as average yield of food, fiber, forage, or wood products from such lands obtained under high levels of management. The productivity shall be determined by yield data or estimates for similar sites based on current data from the U.S. Department of Agriculture, State agricultural universities, or appropriate State natural resource or agricultural agencies.

(b) Each plan shall contain a detailed description of the proposed use, following reclamation, of the land within the proposed permit area including a discussion of the utility and capacity of the reclaimed land to support a variety of alternative uses, and the relationship of the proposed use to existing land use policies and plans. This description shall explain:

(1) How the proposed postmining land use is to be achieved and the necessary support activities which may be needed to achieve the proposed land use; and

(2) Where a land use different from the premining land use is proposed, all materials needed for approval of the alternative use under 30 CFR 817.133.

(3) The consideration which has been given to making all of the proposed surface mining activities consistent with surface owner plans and applicable State and local land use plans and programs.

(c) The description shall be accompanied by a copy of the comments concerning the proposed use by the legal or equitable owner of record of the surface of the proposed permit area and the State and local government agencies which would have to initiate, implement, approve, or authorize the pro-

posed use of the land following reclamation.

[59 FR 27937, May 27, 1994]

**§ 784.16 Reclamation plan: Siltation structures, impoundments, and refuse piles.**

(a) *General.* Each application must include a general plan and a detailed design plan for each proposed siltation structure, impoundment, and refuse pile within the proposed permit area.

(1) Each general plan must—

(i) Be prepared by, or under the direction of, and certified by a qualified, registered, professional engineer, a professional geologist, or in any State which authorizes land surveyors to prepare and certify such plans, a qualified, registered, professional, land surveyor with assistance from experts in related fields such as landscape architecture;

(ii) Contain a description, map, and cross section of the structure and its location;

(iii) Contain preliminary hydrologic and geologic information required to assess the hydrologic impact of the structure;

(iv) Contain a survey describing the potential effect on the structure from subsidence of the subsurface strata resulting from past underground mining operations if underground mining has occurred; and

(v) Contain a certification statement which includes a schedule setting forth the dates when any detailed design plans for structures that are not submitted with the general plan will be submitted to the regulatory authority. The regulatory authority shall have approved, in writing, the detailed design plan for a structure before construction of the structure begins.

(2)(i) Impoundments meeting the criteria for Significant Hazard Class or High Hazard Class (formerly Class B or C) dams in "Earth Dams and Reservoirs," Technical Release No. 60 (210-VI-TR60, July 2005), published by the U.S. Department of Agriculture, Natural Resources Conservation Service, must comply with the requirements of this section for structures that meet the criteria in § 77.216(a) of this title. Technical Release No. 60 (TR-60) is hereby incorporated by reference. The

Director of the Federal Register approves this incorporation by reference in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. You may review and download the incorporated document from the Natural Resources Conservation Service's Web site at [http://www.info.usda.gov/scripts/lpsis.dll/TR/TR\\_210\\_60.htm](http://www.info.usda.gov/scripts/lpsis.dll/TR/TR_210_60.htm). You may inspect and obtain a copy of this document which is on file at the Administrative Record Room, Office of Surface Mining Reclamation and Enforcement, 1951 Constitution Avenue, NW., Washington, DC 20240. For information on the availability of this document at OSM, call 202-208-2823. You also may inspect a copy of this document at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call 202-741-6030 or go to [http://www.archives.gov/federal\\_register/code\\_of\\_federal\\_regulations/ibr\\_locations.html](http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html).

(ii) Each detailed design plan for a structure that meets the criteria in § 77.216(a) of this title must—

(A) Be prepared by, or under the direction of, and certified by a qualified registered professional engineer with assistance from experts in related fields such as geology, land surveying, and landscape architecture;

(B) Include any geotechnical investigation, design, and construction requirements for the structure;

(C) Describe the operation and maintenance requirements for each structure; and

(D) Describe the timetable and plans to remove each structure, if appropriate.

(3) Each detailed design plan for structures not included in paragraph (a)(2) of this section shall:

(i) Be prepared by, or under the direction of, and certified by a qualified, registered, professional engineer, or in any State which authorizes land surveyors to prepare and certify such plans, a qualified, registered, professional, land surveyor, except that all coal processing waste dams and embankments covered by §§ 817.81 through 817.84 of this chapter shall be certified by a qualified, registered, professional engineer;

(ii) Include any design and construction requirements for the structure, including any required geotechnical information;

(iii) Describe the operation and maintenance requirements for each structure; and

(iv) Describe the timetable and plans to remove each structure, if appropriate.

(b) *Siltation structures.* Siltation structures shall be designed in compliance with the requirements of § 817.46 of this chapter.

(c) *Permanent and temporary impoundments.* (1) Permanent and temporary impoundments shall be designed to comply with the requirements of § 817.49 of this chapter.

(2) Each plan for an impoundment meeting the criteria in § 77.216(a) of this title must comply with the requirements of § 77.216-2 of this title. The plan required to be submitted to the District Manager of MSHA under § 77.216 of this title must be submitted to the regulatory authority as part of the permit application.

(3) For impoundments not included in paragraph (a)(2) of this section the regulatory authority may establish through the State program approval process engineering design standards that ensure stability comparable to a 1.3 minimum static safety factor in lieu of engineering tests to establish compliance with the minimum static safety factor of 1.3 specified in § 817.49(a)(4)(ii) of this chapter.

(4) If the structure meets the Significant Hazard Class or High Hazard Class criteria for dams in TR-60 or meets the criteria of § 77.216(a) of this chapter, each plan must include a stability analysis of the structure. The stability analysis must include, but not be limited to, strength parameters, pore pressures, and long-term seepage conditions. The plan also must contain a description of each engineering design assumption and calculation with a discussion of each alternative considered in selecting the specific design parameters and construction methods.

(d) *Coal mine waste impoundments and refuse piles.* If you, the permit applicant, propose to place coal mine waste in a refuse pile or impoundment, or if

you plan to use coal mine waste to construct an impounding structure, you must comply with the applicable requirements in paragraphs (d)(1) through (d)(3) of this section.

(1) *Addressing impacts to perennial and intermittent streams and related environmental values.* You must design the operation to avoid placement of coal mine waste in or within 100 feet of a perennial or intermittent stream to the extent possible. If avoidance is not possible, you must—

(i) Explain, to the satisfaction of the regulatory authority, why an alternative coal mine waste disposal method or an alternative location or configuration that does not involve placement of coal mine waste in or within 100 feet of a perennial or intermittent stream is not reasonably possible.

(ii) Identify a reasonable range of alternative locations or configurations for any proposed refuse piles or coal mine waste impoundments. This provision does not require identification of all potential alternatives. You need identify only those reasonably possible alternatives that are likely to differ significantly in terms of impacts on fish, wildlife, and related environmental values. An alternative is reasonably possible if it meets all the following criteria:

(A) The alternative conforms to the safety, engineering, design, and construction requirements of the regulatory program.

(B) The alternative is capable of being done after consideration of cost, logistics, and available technology. The fact that one alternative may cost somewhat more than a different alternative does not necessarily warrant exclusion of the more costly alternative from consideration. However, an alternative generally may be considered unreasonable if its cost is substantially greater than the costs normally associated with this type of project.

(C) The alternative is consistent with the coal recovery provisions of § 817.59 of this chapter.

(iii) Analyze the impacts of the alternatives identified in paragraph (d)(1)(ii) of this section on fish, wildlife, and related environmental values. The analysis must consider impacts on both aquatic and terrestrial ecosystems.

(A) For every alternative that proposes placement of coal mine waste in a perennial or intermittent stream, the analysis must include an evaluation of impacts on the physical, chemical, and biological characteristics of the stream downstream of the proposed refuse pile or coal mine waste impoundment, including seasonal variations in temperature and volume, changes in stream turbidity or sedimentation, the degree to which the coal mine waste may introduce or increase contaminants, and the effects on aquatic organisms and the wildlife that is dependent upon the stream.

(B) If you have prepared an analysis of alternatives for the proposed impoundment or refuse pile under 40 CFR 230.10 to meet Clean Water Act requirements, you may initially submit a copy of that analysis in lieu of the analysis required under paragraph (d)(1)(iii)(A) of this section. The regulatory authority will determine the extent to which that analysis satisfies the requirements of paragraph (d)(1)(iii)(A) of this section.

(iv) Select the alternative with the least overall adverse impact on fish, wildlife, and related environmental values, including adverse impacts on water quality and aquatic and terrestrial ecosystems.

(2) *Design requirements for refuse piles.* Refuse piles must be designed to comply with the requirements of §§ 817.81 and 817.83 of this chapter.

(3) *Design requirements for impoundments and impounding structures.* Impounding structures constructed of or intended to impound coal mine waste must be designed to comply with the requirements of §§ 817.81 and 817.84 of this chapter, which incorporate the requirements of paragraphs (a) and (c) of § 817.49 of this chapter. In addition,—

(i) The plan for each structure that meets the criteria of § 77.216(a) of this title must comply with the requirements of § 77.216–2 of this title; and

(ii) Each plan for a coal mine waste impoundment must contain the results of a geotechnical investigation to determine the structural competence of the foundation that will support the proposed impounding structure and the impounded material. An engineer or engineering geologist must plan and

## § 784.17

supervise the geotechnical investigation. In planning the investigation, the engineer or geologist must—

(A) Determine the number, location, and depth of borings and test pits using current prudent engineering practice for the size of the impoundment and the impounding structure, the quantity of material to be impounded, and subsurface conditions.

(B) Consider the character of the overburden and bedrock, the proposed abutment sites for the impounding structure, and any adverse geotechnical conditions that may affect the particular impoundment.

(C) Identify all springs, seepage, and groundwater flow observed or anticipated during wet periods in the area of the proposed impoundment.

(D) Consider the possibility of mudflows, rock-debris falls, or other landslides into the impoundment or impounded material.

[44 FR 15366, Mar. 13, 1979, as amended at 45 FR 51550, Aug. 4, 1980; 48 FR 44780, Sept. 30, 1983; 50 FR 16199, Apr. 24, 1985; 53 FR 43605, Oct. 27, 1988; 53 FR 48614, Dec. 1, 1988; 59 FR 52028, Oct. 20, 1994; 73 FR 75879, Dec. 12, 2008]

## § 784.17 Protection of publicly owned parks and historic places.

(a) For any publicly owned parks or any places listed on the National Register of Historic Places that may be adversely affected by the proposed operation, each plan shall describe the measures to be used.

(1) To prevent adverse impacts, or

(2) If a person has valid existing rights, as determined under § 761.16 of this chapter, or if joint agency approval is to be obtained under § 761.17(d) of this chapter, to minimize adverse impacts.

(b) The regulatory authority may require the applicant to protect historic and archeological properties listed on or eligible for listing on the National Register of Historic Places through appropriate mitigation and treatment measures. Appropriate mitigation and treatment measures may be required to be taken after permit issuance provided that the required measures are completed before the properties are affected by any mining operation.

[52 FR 4263, Feb. 10, 1987, as amended at 64 FR 70838, Dec. 17, 1999]

## 30 CFR Ch. VII (7–1–11 Edition)

## § 784.18 Relocation or use of public roads.

Each application shall describe, with appropriate maps and cross sections, the measures to be used to ensure that the interests of the public and landowners affected are protected if, under § 761.14 of this chapter, the applicant seeks to have the regulatory authority approve—

(a) Conducting the proposed surface coal mining operations within 100 feet of the right-of-way line of any public road, except where mine access or haul roads join that right-of-way; or

(b) Relocating a public road.

[44 FR 15366, Mar. 13, 1979, as amended at 64 FR 70838, Dec. 17, 1999]

## § 784.19 Disposal of excess spoil.

(a) If you, the permit applicant, propose to generate excess spoil as part of your operation, you must include the following items in your application—

(1) *Demonstration of minimization of excess spoil.* A demonstration, prepared to the satisfaction of the regulatory authority, that the operation has been designed to minimize, to the extent possible, the volume of excess spoil that the operation will generate, thus ensuring that spoil is returned to the mined-out area to the extent possible, taking into consideration applicable regulations concerning restoration of the approximate original contour, safety, stability, and environmental protection and the needs of the proposed postmining land use.

(2) *Capacity demonstration.* A demonstration, prepared to the satisfaction of the regulatory authority, that the designed maximum cumulative volume of all proposed excess spoil fills within the permit area is no larger than the capacity needed to accommodate the anticipated cumulative volume of excess spoil that the operation will generate, as approved by the regulatory authority under paragraph (a)(1) of this section.

(3) *Discussion of how you will address impacts to perennial and intermittent streams and related environmental values.* You must design the operation to avoid placement of excess spoil in or within 100 feet of a perennial or intermittent